

Anatomy & Physiology

8/26/2016

B Day

Agenda

1. Update Calendar
2. Form Fits Function Activity
3. Language of Anatomy

Homework

- Form Fits Function Writing Assignment
- Language of Anatomy WS's
- Exam 9.8

Warm Up Question
- What do you think the statement "Form Fits Function" means?

Anatomy & Physiology

8/29/2016

A Day

Agenda

1. Update Calendar
2. Form Fits Function Activity
3. Language of Anatomy

Homework

- Form Fits Function Writing Assignment
- Language of Anatomy WS's
- Exam 9.9

Warm Up Question
- What do you think the statement "Form Fits Function" means?

Open Ended Question

What do you think the statement "Form Fits Function" means?

Relationship between A&P

- Principle of Complimentary Structure and Function
 - Structures determine what function can take place
 - Function always reflects structure

Form Fits Function Activity

- This object is a _____, and the function of the object is to _____. The structure that allows it to perform its' specific function is _____.

OR

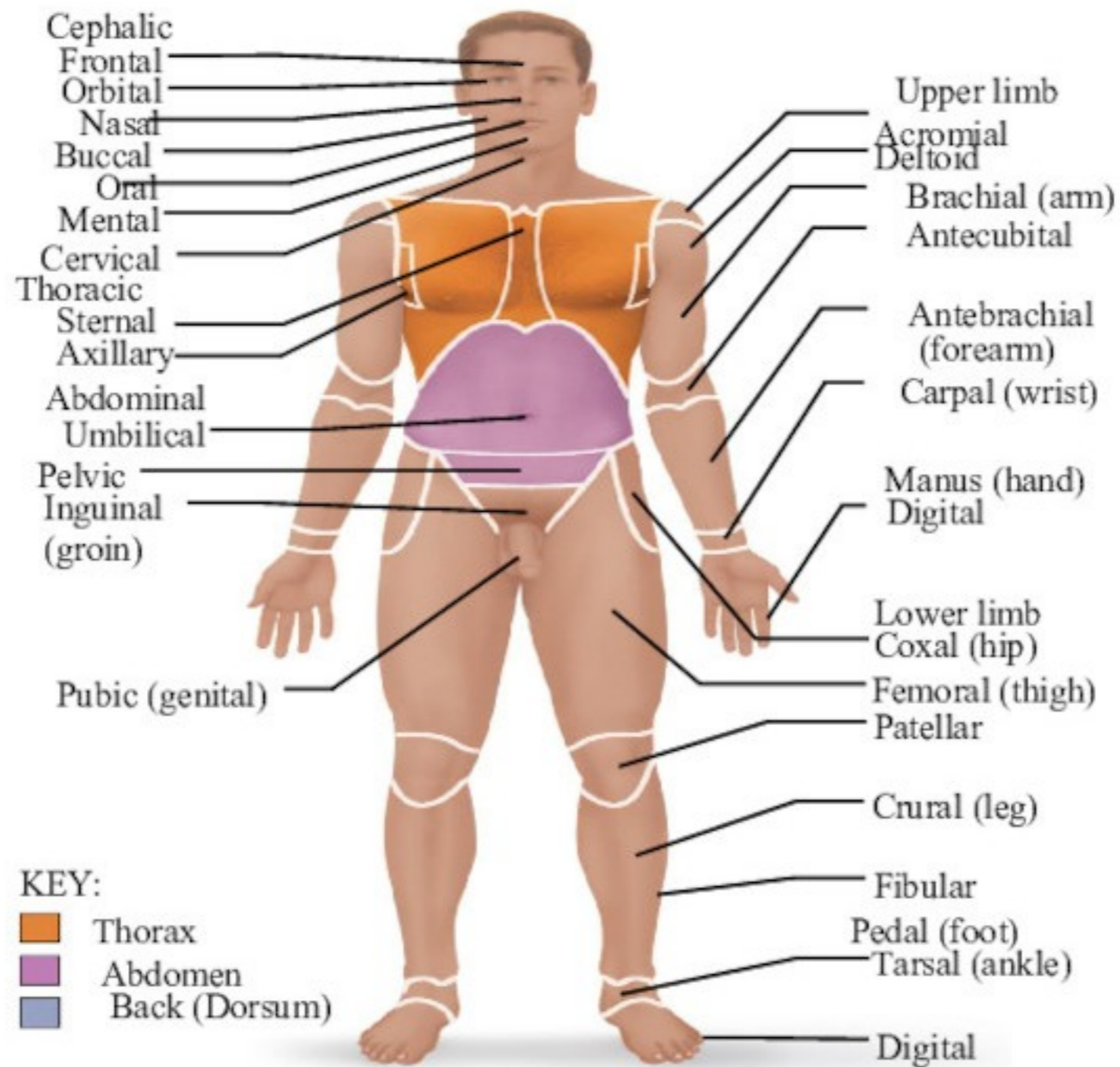
- This object is a _____, and its structure is _____, which helps it to perform its function of _____.

The Language of Anatomy

- Special terminology is used to prevent misunderstanding
- Exact terms are used for
 - Position
 - Direction
 - Regions
 - Structures

Regional Terms

- Anterior body landmarks

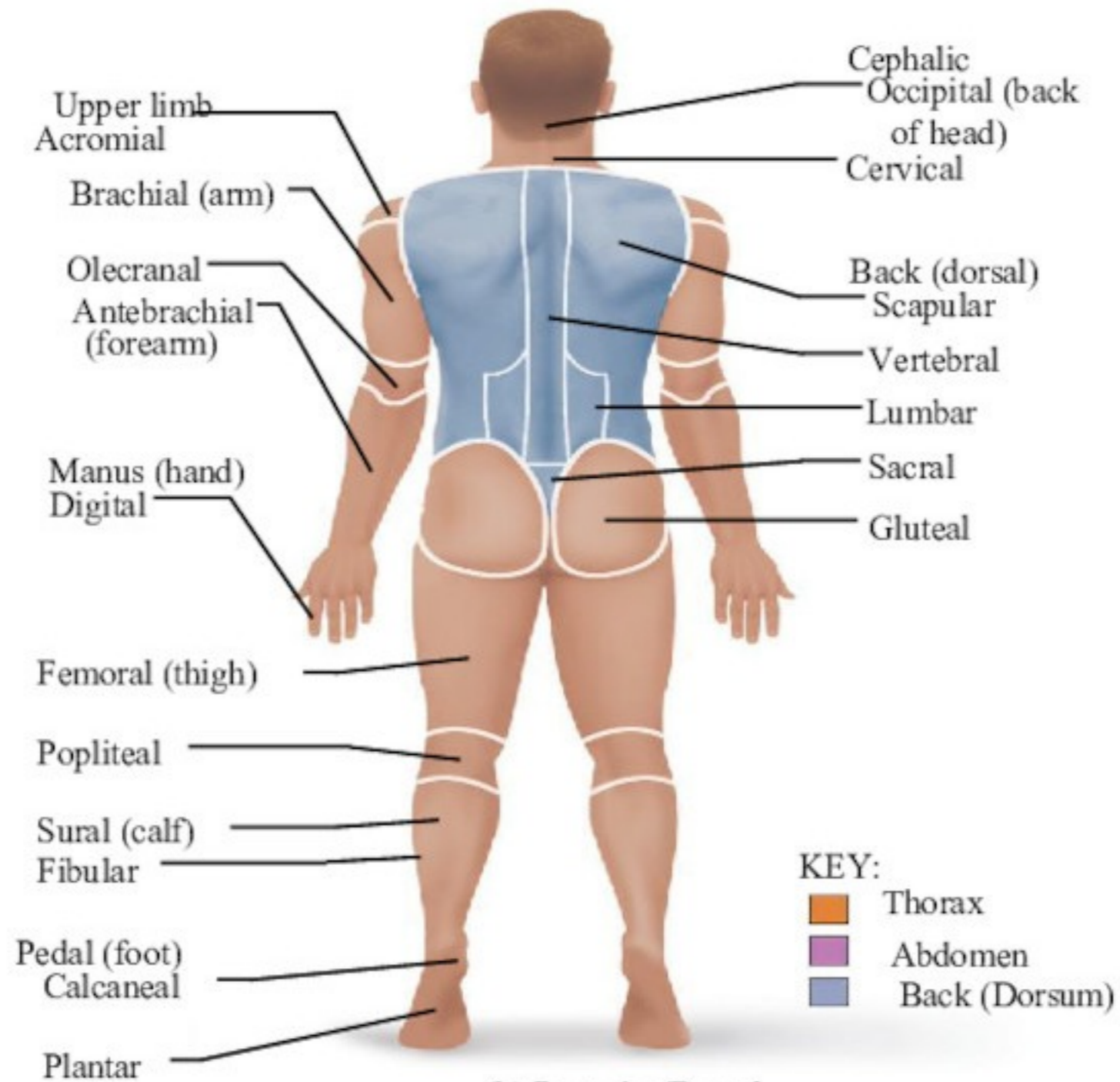


(a) Anterior/Ventral

Figure 1.5a

Regional Terms

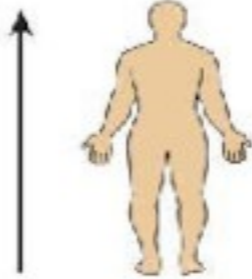
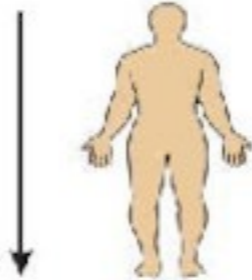
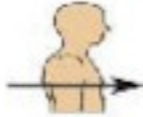

- Posterior body landmarks



(b) Posterior/Dorsal

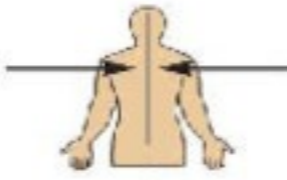

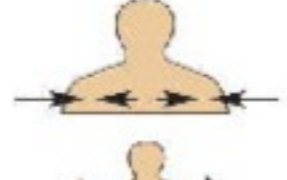
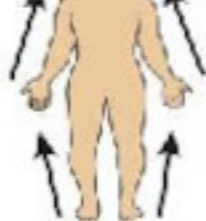
Figure 1.5b

Table 1.1**Orientation and Directional Terms**

Term	Definition	Illustration	Example
Superior (cranial or cephalad)	Toward the head end or upper part of a structure or the body; above		The forehead is superior to the nose.
Inferior (caudal)*	Away from the head end or toward the lower part of a structure or the body; below		The navel is inferior to the breastbone.
Ventral (anterior)†	Toward or at the front of the body; in front of		The breastbone is anterior to the spine.
Dorsal (posterior)†	Toward or at the backside of the body; behind		The heart is posterior to the breastbone.

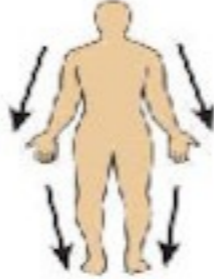


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Table 1.1**Orientation and Directional Terms**

Term	Definition	Illustration	Example
Medial	Toward or at the midline of the body; on the inner side of		The heart is medial to the arm.
Lateral	Away from the midline of the body; on the outer side of		The arms are lateral to the chest.
Intermediate	Between a more medial and a more lateral structure		The collarbone is intermediate between the breastbone and the shoulder.
Proximal	Close to the origin of the body part or the point of attachment of a limb to the body trunk		The elbow is proximal to the wrist (meaning that the elbow is closer to the shoulder or attachment point of the arm than the wrist is).

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Table 1.1**Orientation and Directional Terms**

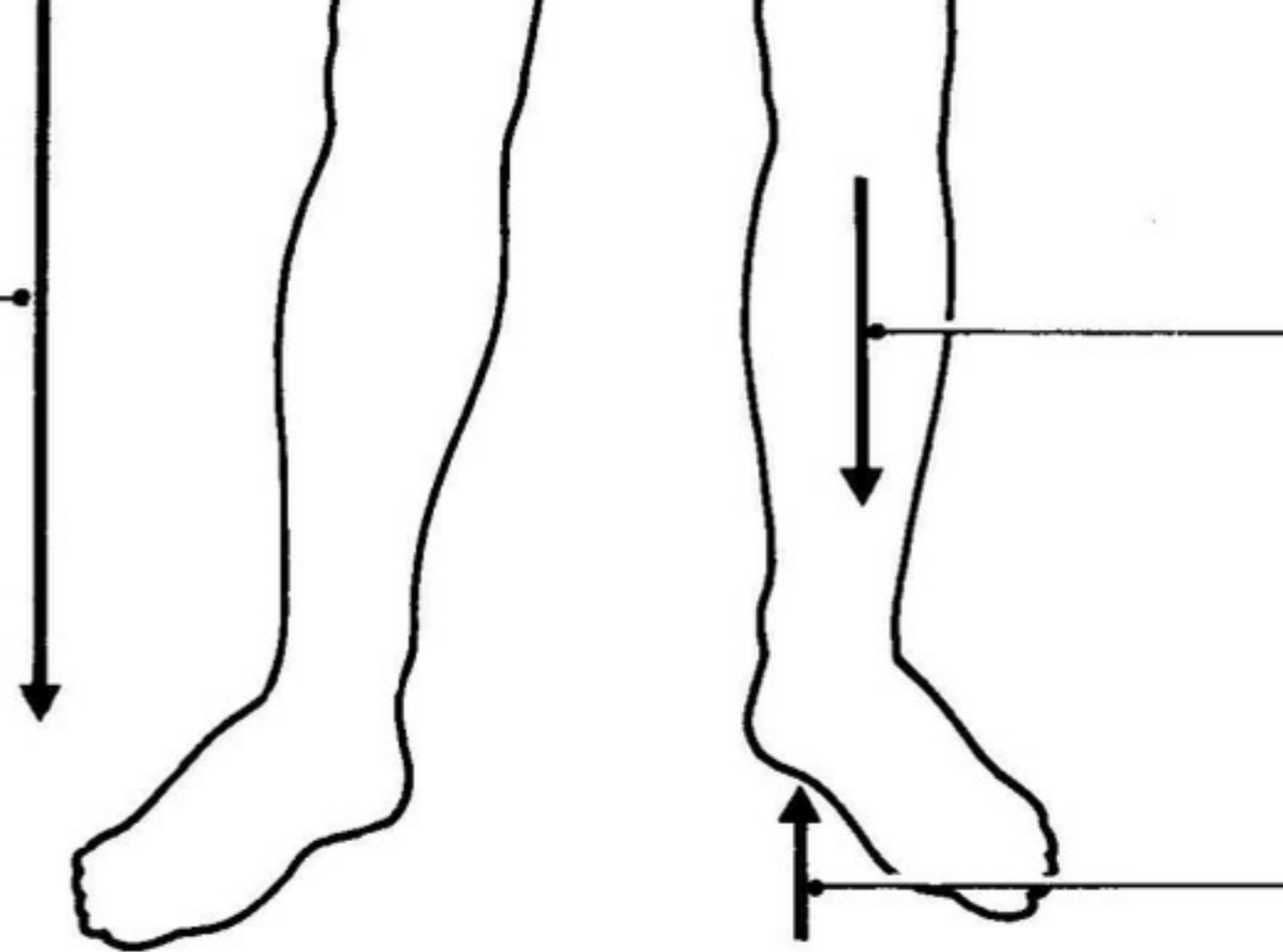
Term	Definition	Illustration	Example
Distal	Farther from the origin of a body part or the point of attachment of a limb to the body trunk		The knee is distal to the thigh.
Superficial (external)	Toward or at the body surface		The skin is superficial to the skeleton.
Deep (internal)	Away from the body surface; more internal		The lungs are deep to the rib cage.

The term *caudal*, literally "toward the tail," is synonymous with *inferior* only to the inferior end of the spine.

Ventral and *anterior* are synonymous in humans; this is not the case in four-legged animals. *Ventral* refers to the "belly" of an animal and thus is the inferior surface of four-legged animals. Likewise, although the dorsal and posterior surfaces are the same in humans, the term *dorsal* refers to an animal's back. Thus, the dorsal surface of four-legged animals is their superior surface.

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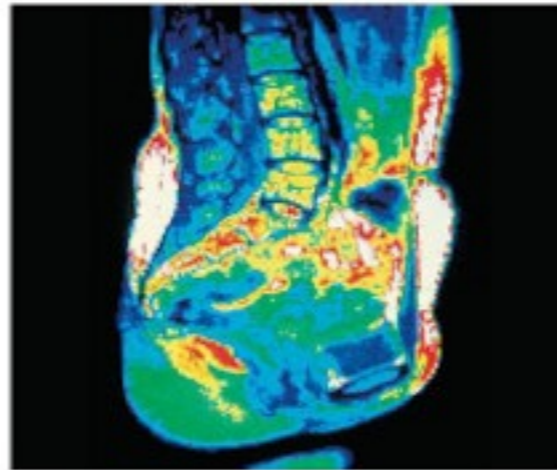
- 1 Cranial – toward the head
- 2 Caudal – toward the feet
- 3 Medial – toward the middle
- 4 Lateral – toward/from the side
- 5 Proximal – toward the attachment of a limb

- 6 Distal – toward the fingers/toes
- 7 Superior - above
- 8 Inferior – below
- 9 Anterior toward/from the front
- 10 Posterior – toward/from the back

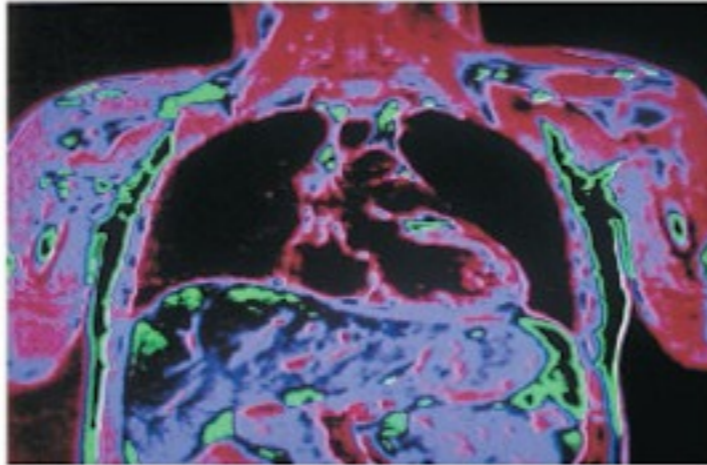
- 11 Peripheral – toward the surface
- 12 Palmar – toward/on the palm of the hand
- 13 Plantar – toward/on the sole of the foot

Body Planes and Sections

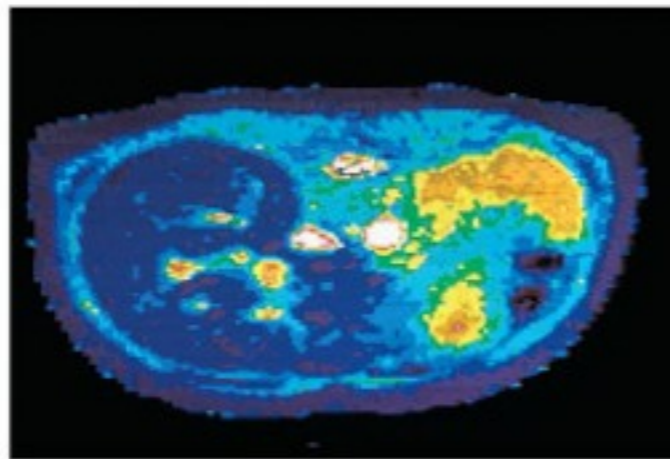
- A **sagittal** section divides the body (or organ) into left and right parts.
- A median, or **midsagittal**, section divides the body (or organ) into *equal* left and right parts.
- A **frontal**, or coronal, section divides the body (or organ) into anterior and posterior parts.
- A **transverse**, or cross, section divides the body (or organ) into superior and inferior parts.



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(a) Median (midsagittal)



(b) Frontal (coronal) plane



(c) Transverse plane

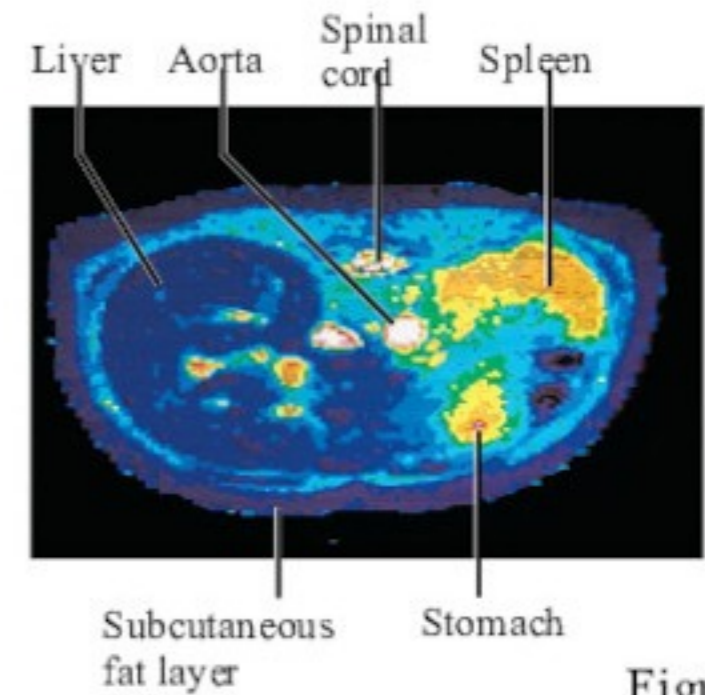
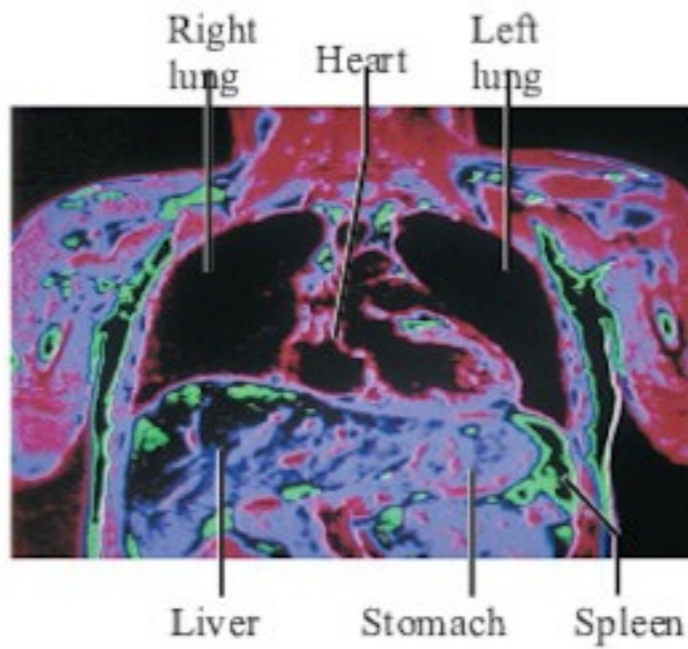
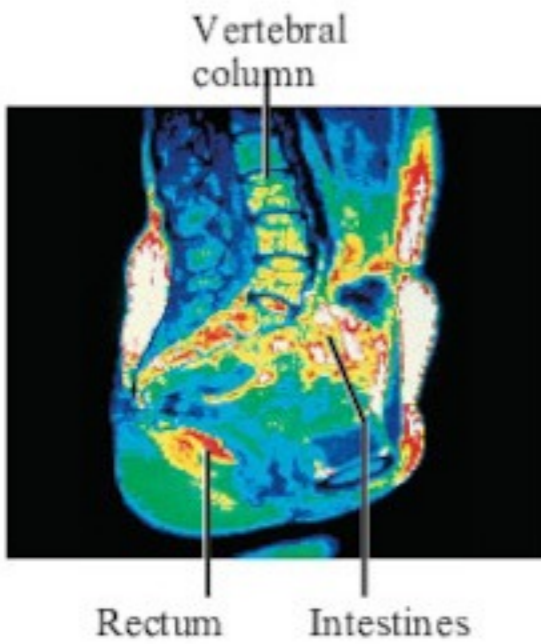
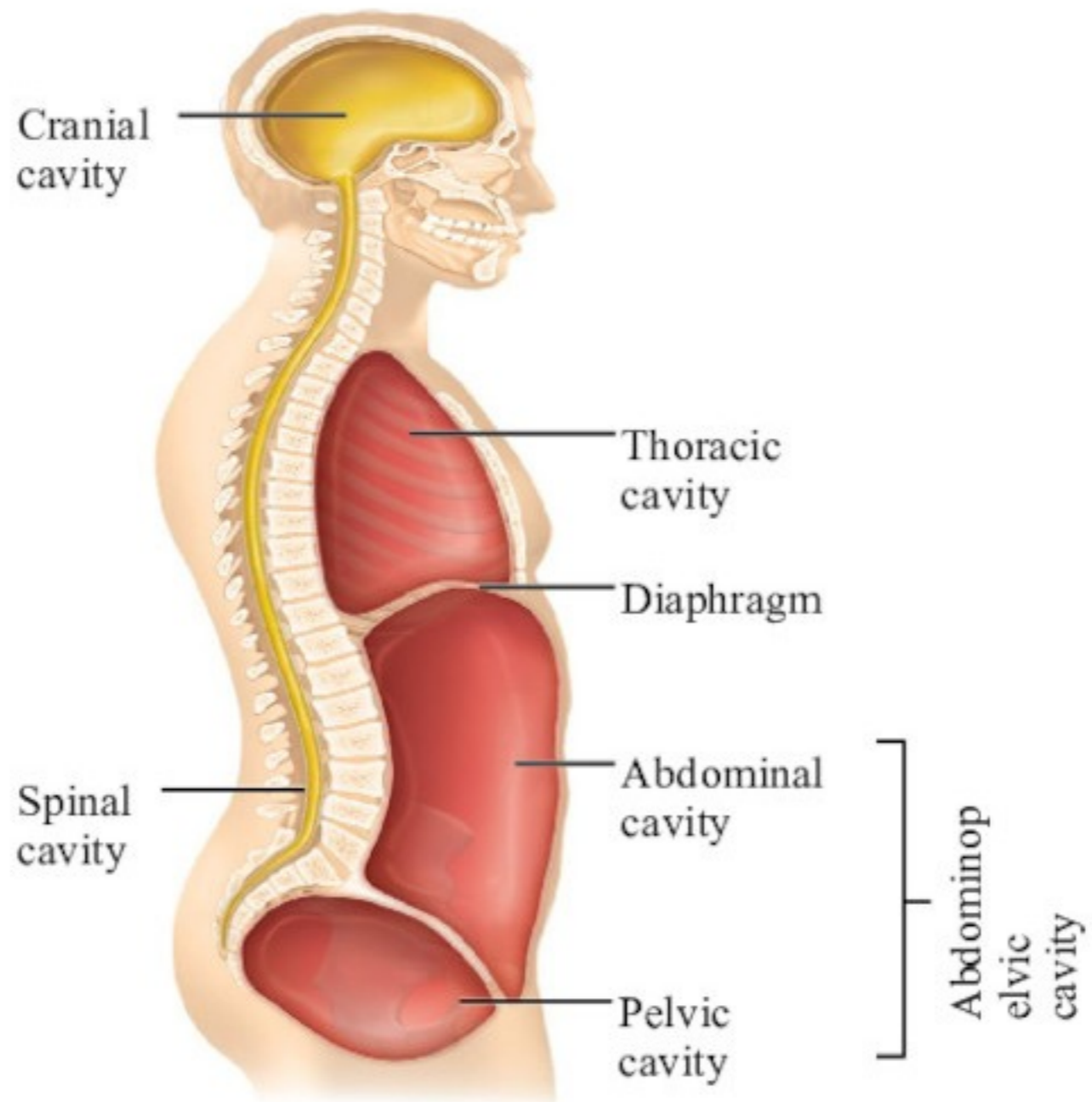


Figure 1.6

Body Cavities

- **Dorsal** body cavity
 - **Cranial** cavity houses the brain
 - **Spinal** cavity houses the spinal cord
- **Ventral** body cavity
 - **Thoracic** cavity houses heart, lungs, and others
 - **Abdominopelvic** cavity houses digestive system and most urinary system organs



KEY:
 Dorsal body cavity Ventral body cavity

Figure 1.7

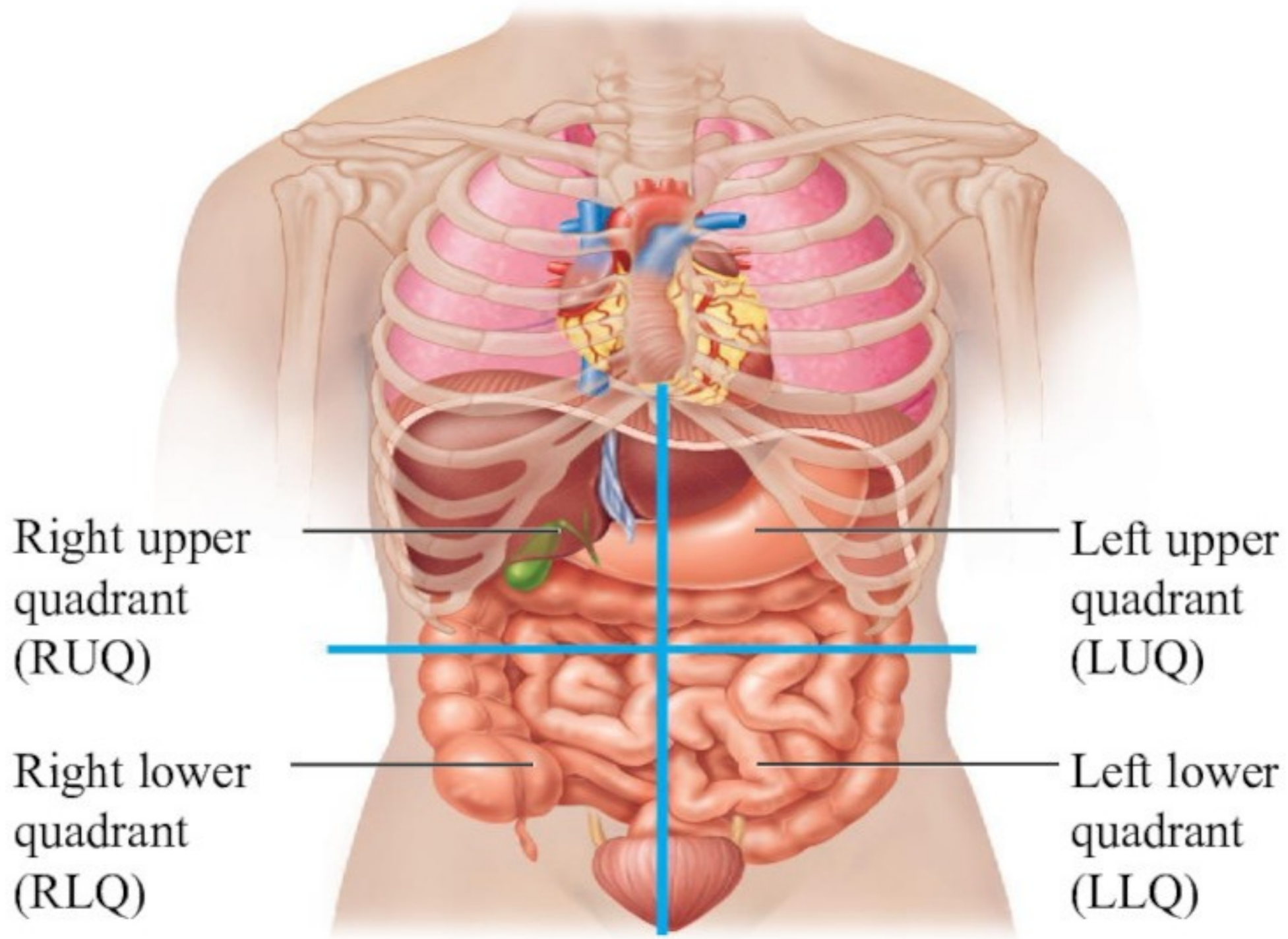
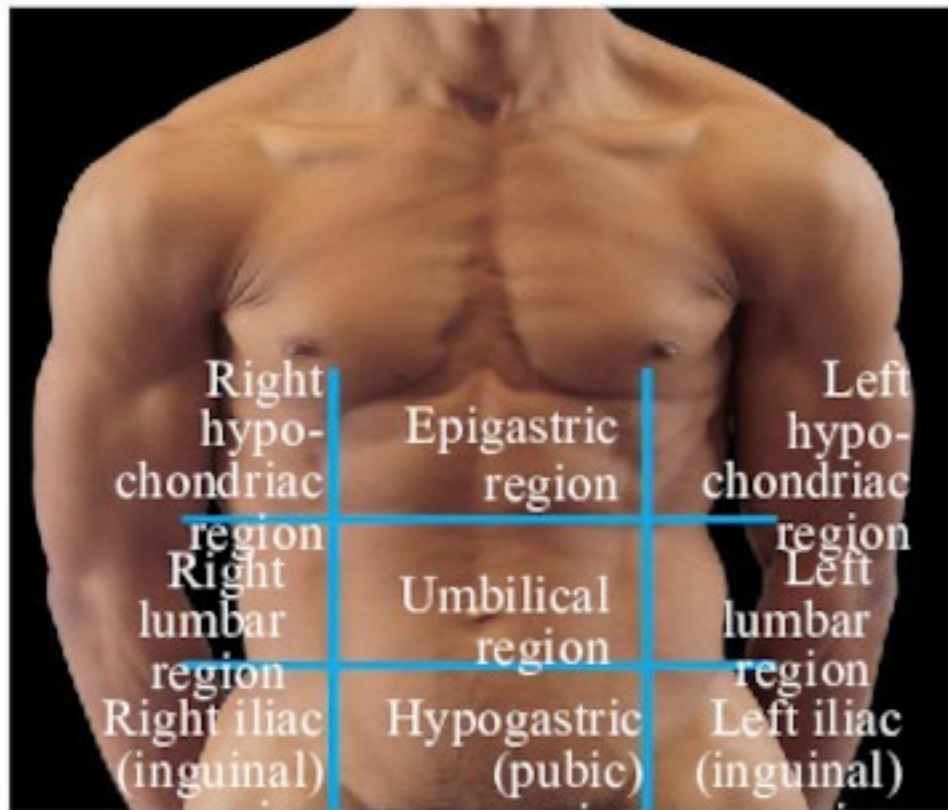
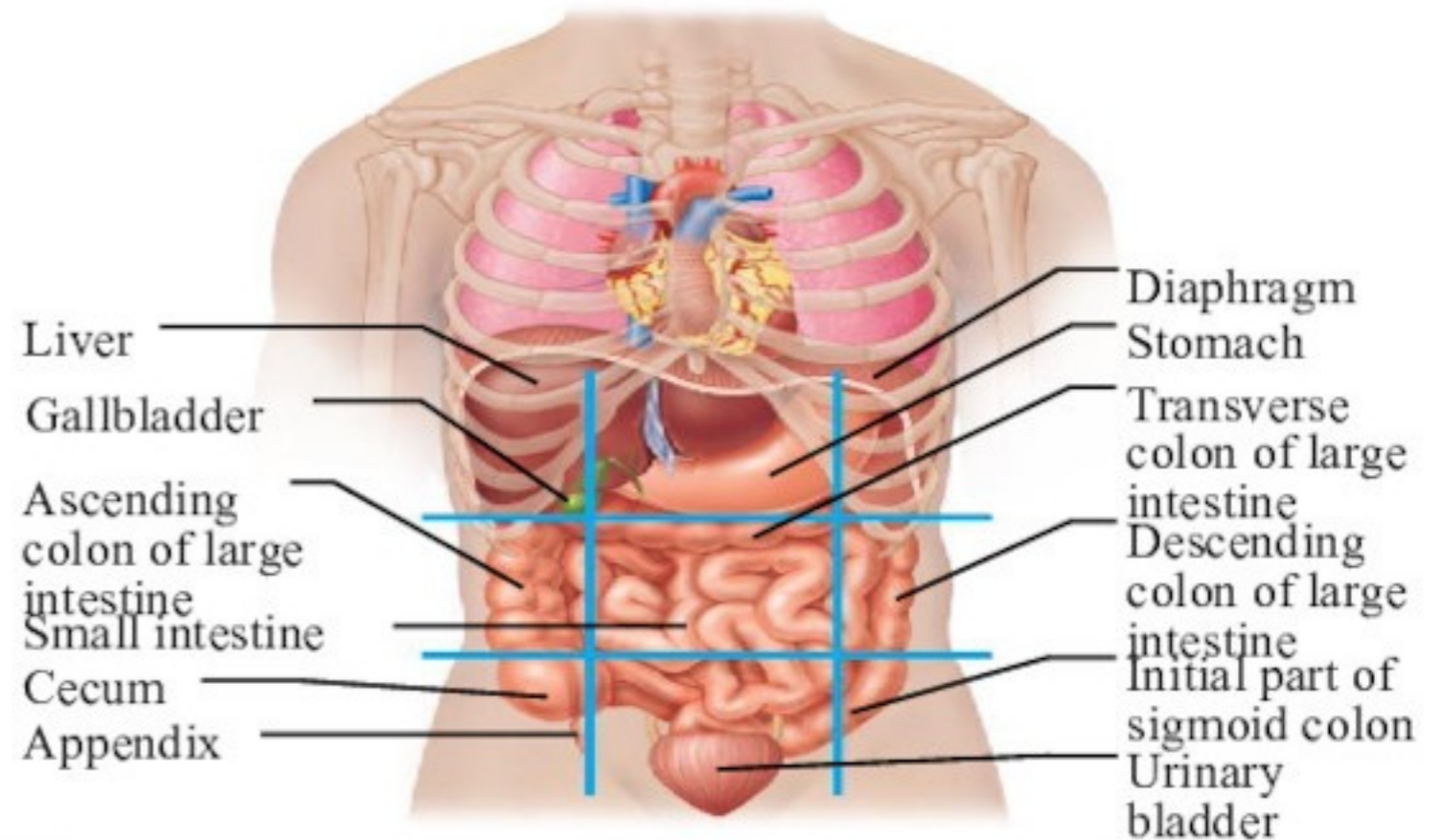


Figure 1.8



(a) Nine regions delineated by four planes



(b) Anterior view of the nine regions showing the superficial organs

Figure 1.9a-b



Slideshow

The Language of Anatomy

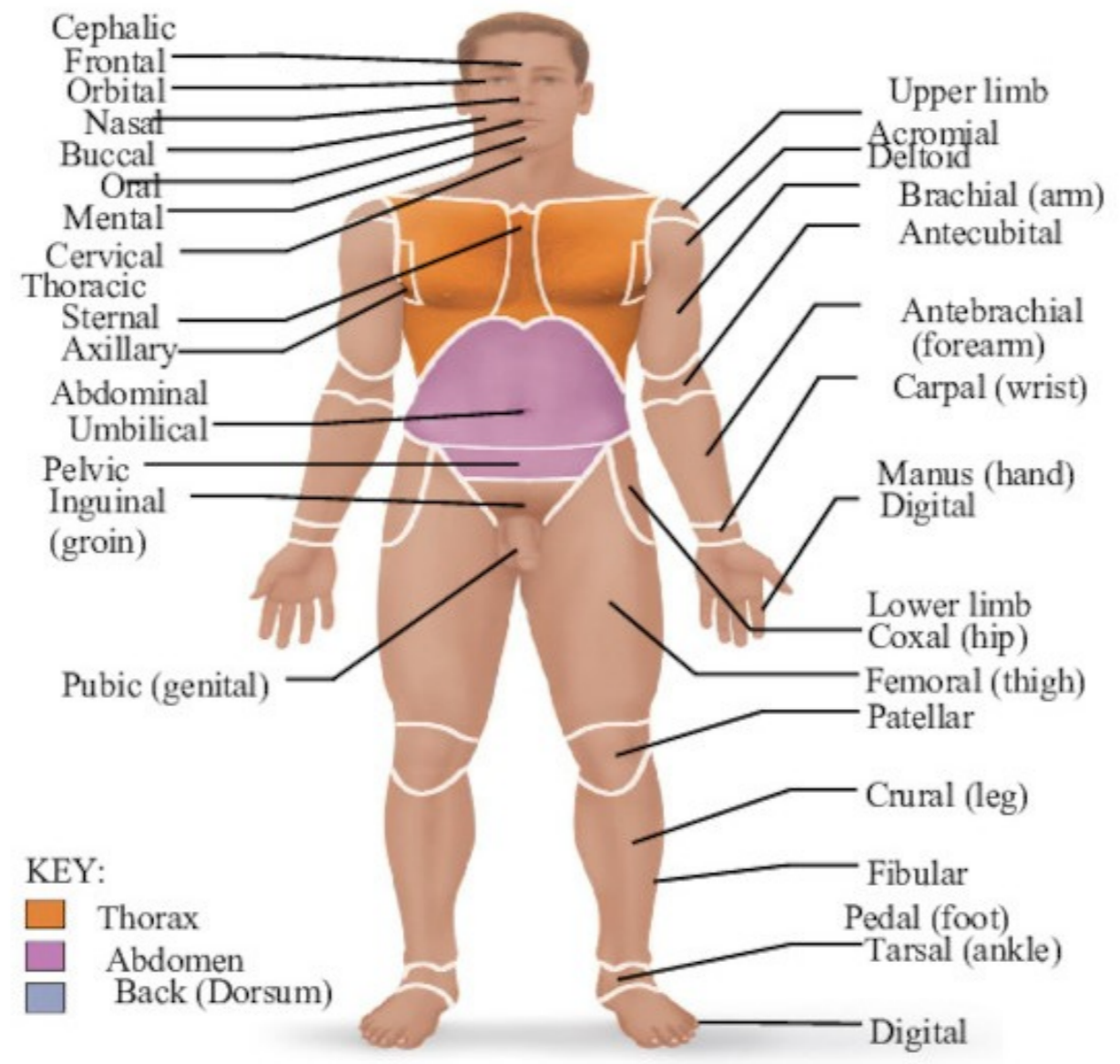
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Regional Terms

- Anterior body landmarks

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(a) Anterior/Ventral

Figure 1.5a

Regional Terms

- Posterior body landmarks

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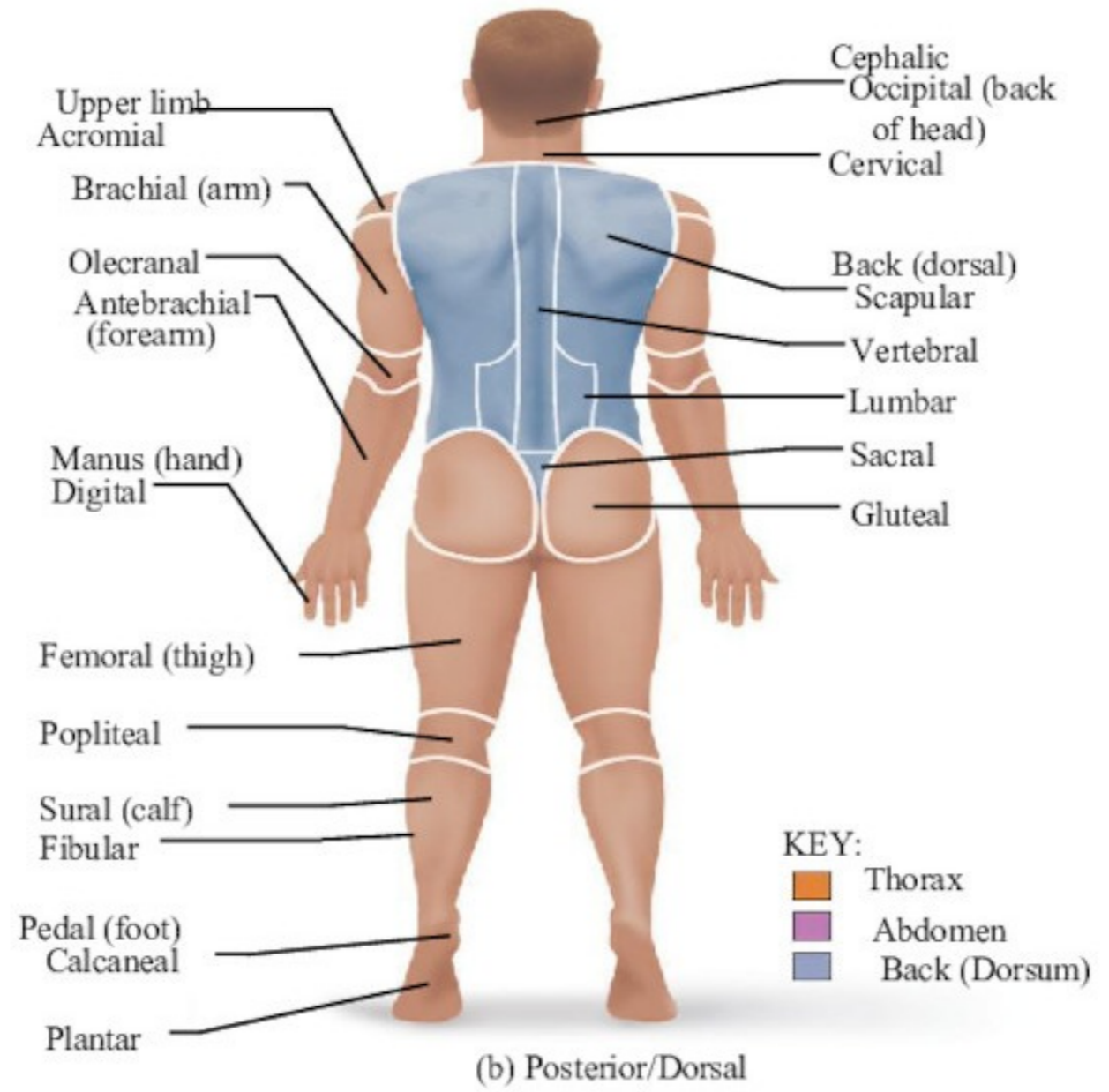
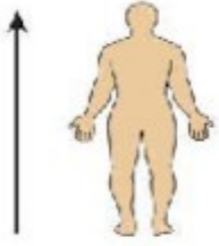
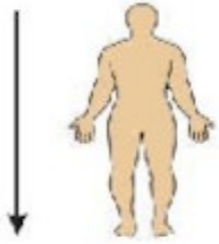
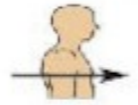



Figure 1.5b

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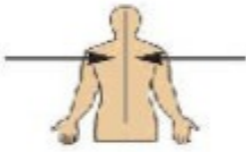


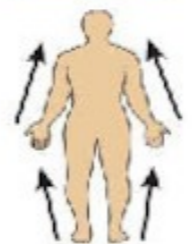
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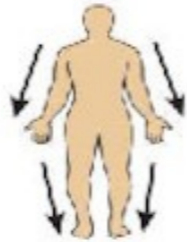


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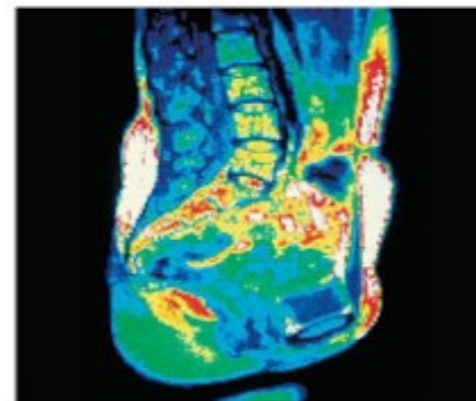
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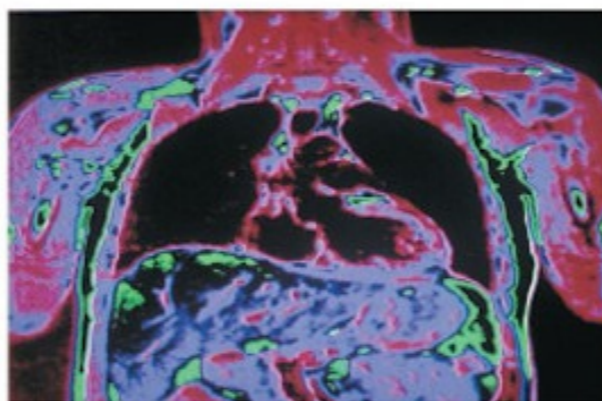
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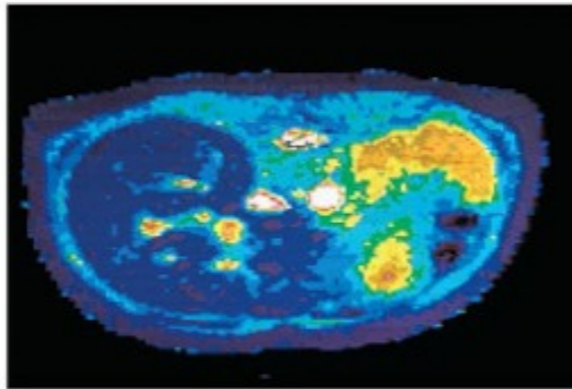
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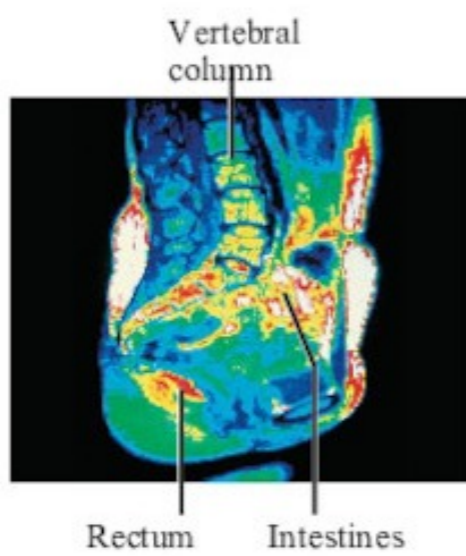


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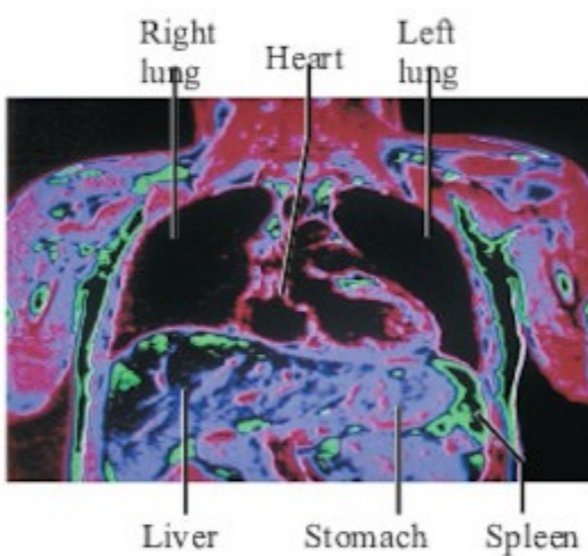
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(a) Median (midsagittal)



(b) Frontal (coronal) plane



(c) Transverse plane

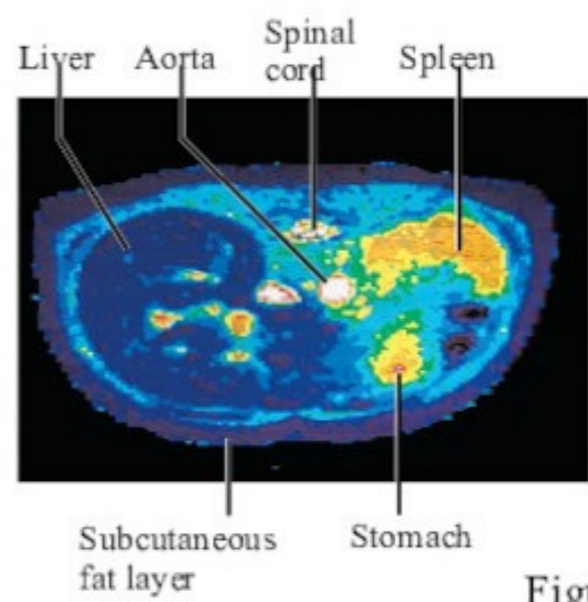
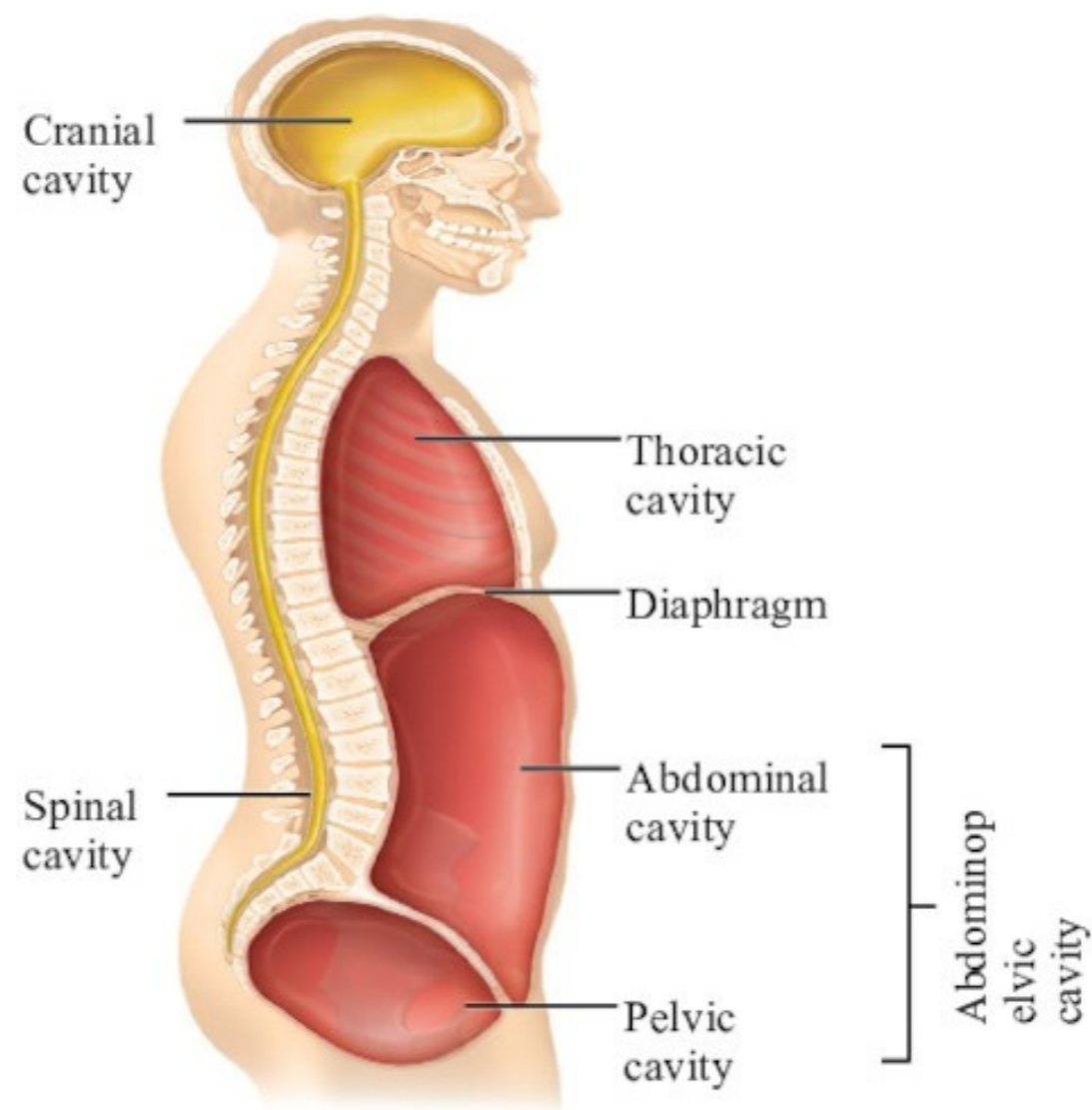


Figure 1.6

Body Cavities

- **Dorsal** body cavity
 - **Cranial** cavity houses the brain
 - **Spinal** cavity houses the spinal cord
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 - **Thoracic** cavity houses heart, lungs, and others
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KEY:
■ Dorsal body cavity ■ Ventral body cavity

Figure 1.7

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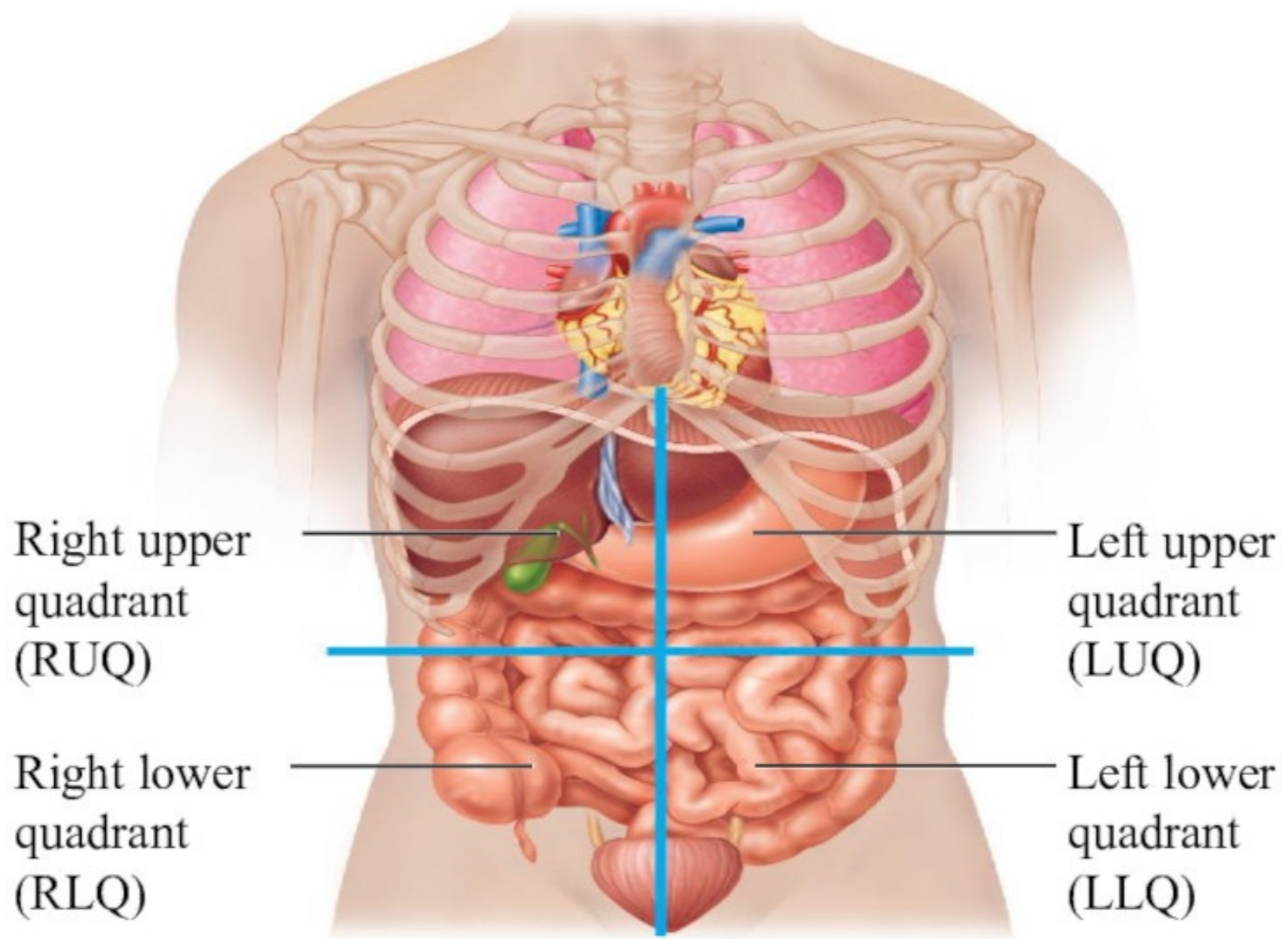
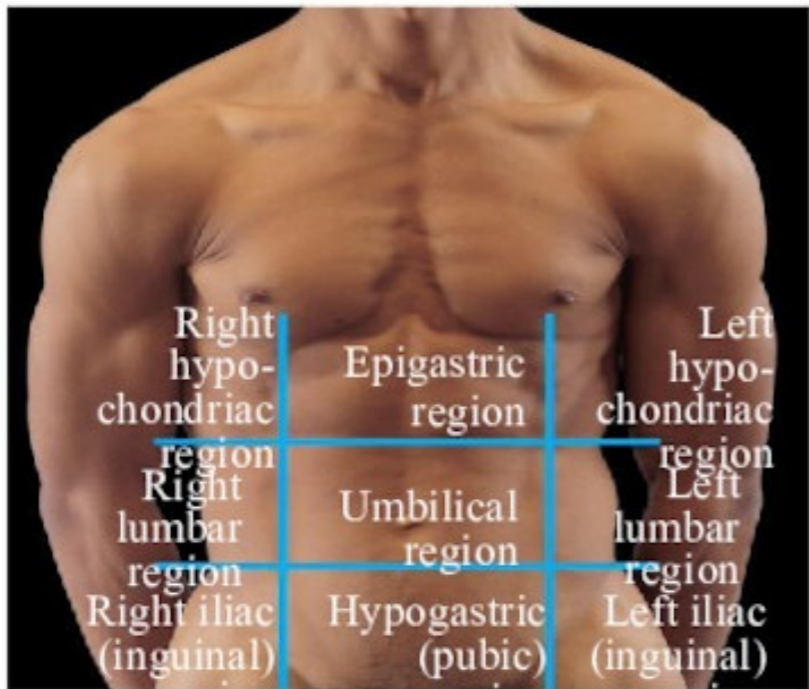
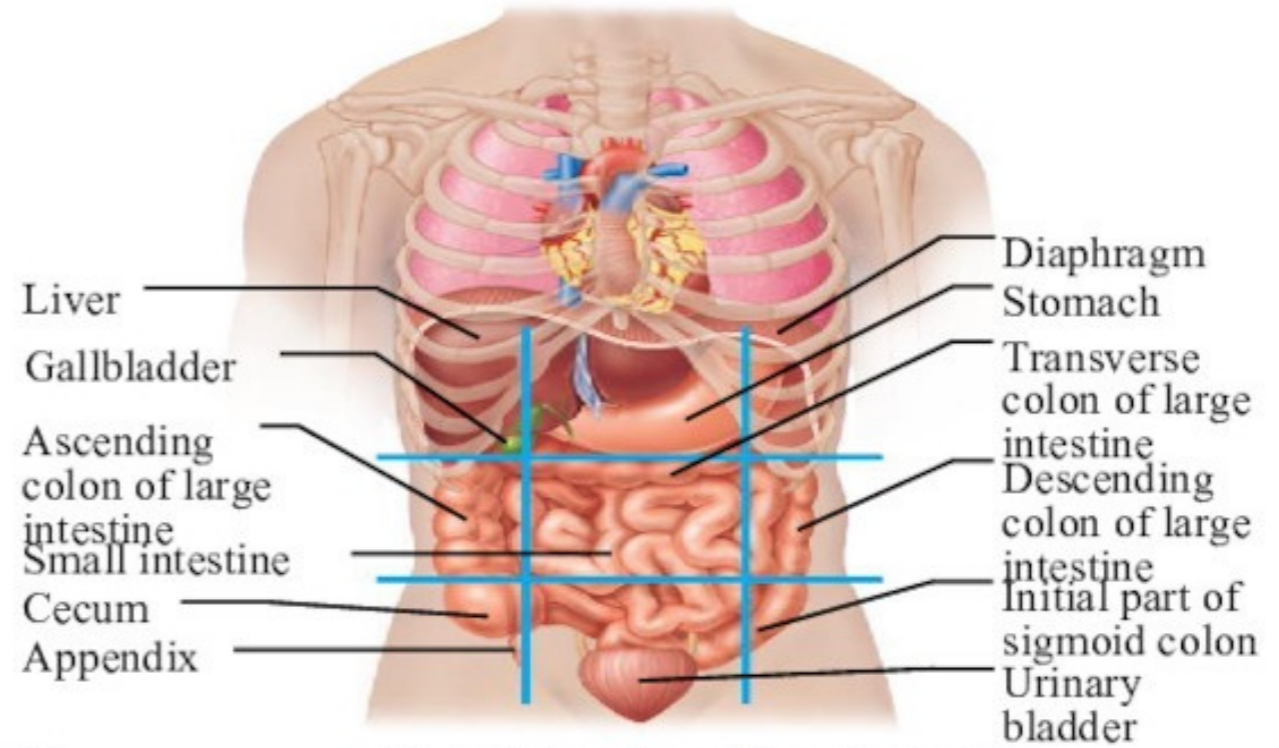


Figure 1.8

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(a) Nine regions delineated by four planes



(b) Anterior view of the nine regions showing the superficial organs

Figure 1.9a-b

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